

## CLAIMS

We claim:

- 5       1. A method for using a single broadband SS7 signaling gateway for multiple wireless access gateways, comprising the steps of:
- forming a cluster of media gateways, each of the media gateways having a respective transcoder;
- providing at least one first media gateway of the cluster of media gateways
- 10       having an integrated broadband SS7 signaling gateway, at least one second media gateway of the cluster of media gateways being without an integrated broadband SS7 signaling gateway; and
- using the at least one first media gateway for SS7 signaling and using the at least one second gateway for resources other than SS7 signaling.
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2. The method according to claim 1, wherein the method further comprises of distributing control signaling related to the establishment, release and maintenance of AAL2 point-to-point connections across a series of ATM VCCs that carry AAL2 links.
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3. The method according to claim 1, wherein the method further comprises of using a single broadband SS7 signaling gateway for multiple wireless access gateways.

4. The method according to claim 1, wherein the method further comprises of using a single broadband SS7 signaling stack as the AAL2 signaling entity to the multiple AAL2 service endpoints acting as AAL2 served users.
5. The method according to claim 1, wherein the method further comprises of using an AAL2 signaling protocol that provides the signaling capability to establish, release and maintain AAL2 point-to-point connections across a series of ATM VCCs that carry AAL2 links.
6. The method according to claim 5, wherein the method further comprises of the signaling protocol is defined as a set of at least three entities including a protocol entity, a nodal function, and a served user, and wherein, a respective interface is operatively connected between the nodal function and the served user for each of the media gateways, and wherein the first gateway contains the nodal functions and each of the media gateway contain a served user.

7. A method for distribution of control signaling related to the establishment, release and maintenance of AAL2 point-to-point connections across a series of ATM VCCs that carry AAL2 links, comprising the steps of:
- forming a cluster of media gateways, each of the media gateways having a  
5 respective transcoder;
- providing at least one first media gateway of the cluster of media gateways having an integrated broadband SS7 signaling gateway, at least one second media gateway of the cluster of media gateways being without an integrated broadband SS7 signaling gateway; and
- 10 using the at least one first media gateway for SS7 signaling and using the at least one second gateway for resources other than SS7 signaling.
8. The method according to claim 7, wherein the method further comprises of using a single media gateway with an integrated broadband SS7 signaling  
15 gateway as a single SS7 point code for more than one gateway of the cluster of media gateways.
9. The method according to claim 7, wherein the method further comprises of using a single broadband SS7 signaling stack as the AAL2 signaling entity to  
20 the multiple AAL2 service endpoints acting as AAL2 served users.
10. The method according to claim 7, wherein the method further comprises of using an AAL2 signaling protocol that provides the signaling capability to establish, release and maintain AAL2 point-to-point connections across a  
25 series of ATM VCCs that carry AAL2 links.

11. The method according to claim 10, wherein the signaling protocol is defined  
as a set of at least three entities including a protocol entity, a nodal function,  
and a served user, and wherein, a respective interface is operatively connected  
5 between the nodal function and the served user for each of the media  
gateways, and wherein the first gateway contains the nodal functions and each  
of the media gateway contain a served user.
12. A system for distribution of control signaling related to the establishment,  
10 release and maintenance of AAL2 point-to-point connections across a series of  
ATM VCCs that carry AAL2 links, comprising:  
a cluster of media gateways, each of the media gateways having a  
respective transcoder;  
at least one first media gateway of the cluster of media gateways having an  
15 integrated broadband SS7 signaling gateway;  
at least one second media gateway of the cluster of media gateways being  
without an integrated broadband SS7 signaling gateway; and  
the at least one first media gateway having a function for SS7 signaling  
and the at least one second gateway having at least one function for a resource  
20 other than SS7 signaling.
13. The system according to claim 12, wherein the system further comprises of the  
first media gateway has an integrated broadband SS7 signaling gateway as a  
single SS7 point code for more than one gateway of the cluster of media  
25 gateways.

14. The system according to claim 12, wherein a single broadband SS7 signaling stack is the AAL2 signaling entity to the multiple AAL2 service endpoints acting as AAL2 served users.

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15. The system according to claim 12, wherein the system further comprises of an AAL2 signaling protocol that provides the signaling capability to establish, release and maintain AAL2 point-to-point connections across a series of ATM VCCs that carry AAL2 links.

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16. A system for distribution of control signaling related to the establishment, release and maintenance of AAL2 point-to-point connections across a series of ATM VCCs that carry AAL2 links, comprising:

15 a cluster of media gateway units, each of the media gateway units having a respective transcoder, a signaling protocol having at least a protocol entity, a nodal function, and a served user;

a respective interface operatively connected between the nodal function on the first gateway and the served user for each of media gateway units;

20 at least one first media gateway unit of the cluster of media gateway units having an integrated broadband SS7 signaling gateway;

at least one second media gateway unit of the cluster of media gateway units being without an integrated broadband SS7 signaling gateway; and

25 the at least one first media gateway unit having a function for SS7 signaling and the at least one second gateway unit having at least one function for a resource other than SS7 signaling.

17. The system according to claim 16, wherein the function for SS7 signaling is a broadband SS7 signaling stack, and wherein the single broadband SS7 signaling stack is the AAL2 signaling entity to the multiple AAL2 service endpoints acting as AAL2 served users.
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18. The system according to claim 16, wherein the first media gateway unit having an integrated broadband SS7 signaling gateway is a single SS7 point code for more than one gateway unit of the cluster of media gateway units.
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19. The system according to claim 16, wherein each of the media gateway units is an AAL2 service endpoint.